What Is Claimed Is:

1. A device for characterizing spheroids comprising
- a tube (1, 2) which has an inner diameter in a region (1) of its longitudinal axis which is smaller than the diameter of the to-be-characterized spheroid (6), with said tube being composed of an electrically insulating material at least at its inner circumference;
- a first pair of electrodes (3, 4) in said tube (2) on one first side of said region (1) and a second pair of electrodes (3, 4) in said tube (2) on a second side of said region (1), which lies opposite said first side, with each pair of electrodes (3,4) having an inner electrode (3) and an outer electrode (4) of which said inner electrode (3) lies closer to said region (1) than said outer electrode (4); and
- a measurement arrangement (11,12) having a current source (11) which is connected to the outer electrodes (4) and a voltage meter (12) which is connected to the inner electrodes (3).

2. A device according to claim 1, wherein said tube (1,2) has a conical-shaped enlargement on one side or on both sides of said region (1).

3. A device according to claim 1 or 2, wherein said electrodes (3,4) extend radially into said tube (2).

4. A device according to one of the claims 1 to 3, wherein in said region (1), said tube (1,2) has an inner diameter of between 0.1 and 0.5mm .

5. A device according to one of the claims 1 to 4, wherein said tube (1,2) is composed of glass.

6. A device according to one of the claims 1 to 5, wherein said inner diameter of said tube (1,2) changes step-like in said region (1).

7. A method for characterizing spheroids having the following steps: - provision of a tube (1,2) which has in region (1) an inner diameter which is smaller than the diameter of the to-be-characterized spheroid, with said tube in said region (1) being composed of an electrically insulating material at least at its inner circumference;
- filling said tube (1,2) with a liquid culture medium (5);
- introduction of a spheroid (6) into said region (1)

of said tube (1,2) in such a manner that the latter has mechanical contact over the entire circumference with the inner wall of said region (1) of said tube (1,2);
- generation of an alternating current flow in said culture medium (5) along the longitudinal axis of said tube over said spheroid (6); and
- measurement of the drop in alternating voltage over said spheroid (6) along said longitudinal axis of said tube.

8. A method according to claim 7, wherein the introduction of said spheroid (6) is conducted by drawing in or pressing in by means of generating a difference in pressure in said culture medium (5).

9. A method according to one of the claims 7 or 8, wherein correct positioning of said spheroid (6) in said region (1) occurs by means of generating and measuring a direct current along said longitudinal axis of said tube in said region (1) during introduction of said spheroid (6).

10. A method according to one of the claims 6 to 9, wherein said to-be-characterized spheroid (6) is preselected according to size by means of a perforated screen.